

INSPECTION PORT

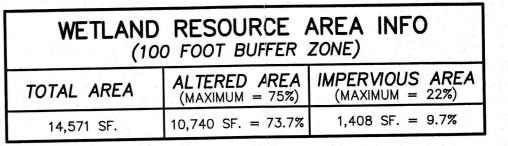
EXISTING WATER SERVICE

BENCH MARK (SEE CHART)

EXISTING GAS SERVICE

# **VARIANCES:**

- REQUEST VARIANCE TO REDUCE THE SEPARATION FROM EST. SEASONAL HIGH GROUND WATER TO BOTTOM OF SOIL ABSORPTION SYSTEM FROM 5' TO 4' (SEE PROFILE FOR SEPARATION) 310 CMR 15.405 (1) (h).
- REQUEST VARIANCE TO REDUCE AREA OF STONE FIELD/BED FROM 800sf MIN. REQUIRED BY LOCAL REGULATION TO 744sf.



-3"(MIN.) TOP SOIL

4" PERF. SCH 40

PVC PIPE (TYP)

SECTION A-A

....6**'**.::

∷3.0'

4" SCH40 SOLD

- WALL PVC PIPE

—2% MIN.

9"(MIN.) CLEAN FILL

6" EFFECTIVE

DISTRIBUTION BOX -WITH INLET TEE

INCREASE SIZE OF

FORCE MAIN TO

3" OR 4" AT MIN.

2" SCH40 PVC \_\_

FORCE MAIN

3FT. FROM D-BOX

LIMIT OF REMOVAL

OF UNSUITABLE

MATERIAL (SEE

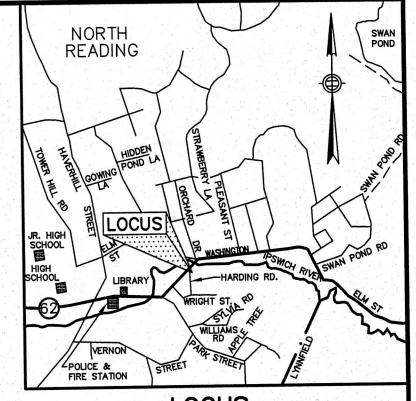
GEN. NOTE 1)

-PROP. FINISH GRADE

∠3/4" - 1 1/2" DOUBLE WASHED STONE

RISER

WASHED STONE



LOCUS NOT TO SCALE

## GENERAL NOTES

- 1. ALL ORGANIC MATERIAL MUST BE REMOVED FROM THE AREA DIRECTLY UNDER AND BEYOND THE PROPOSED SOIL ABSORPTION SYSTEM. THIS AREA MUST BE BACKFILLED TO ELEVATIONS INDICATED ON THESE PLANS WITH SELECT ON-SITE OR IMPORTED SOIL MATERIAL, CONSISTING OF CLEAN GRANULAR SAND OR OTHER GRANULAR MATERIAL, FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES. MIXTURES AND LAYERS SHALL NOT BE USED. THE FILL MATERIAL SHALL MEET THE SPECIFICATIONS OF TITLE 5, SECTION 15.255 (3).
- HEAVY MACHINERY SHALL NOT BE PERMITTED TO PASS OVER THE SOIL ABSORPTION SYSTEM.
- TIGHT JOINT PIPING IS TO CONSIST OF POLYVINYL CHLORIDE PIPE (P.V.C.) SCHEDULE 40, UNLESS OTHERWISE NOTED.
- 4. SEPTIC TANK INLET AND OUTLET TEES SHALL BE AS SPECIFIED IN TITLE 5, SECTION 15.227.
- ALL DISTURBED AREAS ARE TO BE LOAMED, SEEDED AND MAINTAINED
- 6. THE GENERAL CONTRACTOR IS TO BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL OF ALL COMPONENTS.

TO PREVENT EROSION.

- 7. THE DESIGNER HAS NOT BEEN RETAINED BY THE CLIENT TO CONSTRUCT OR SUPERVISE THE CONSTRUCTION OF THE SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION OF INSTALLATION OF THE SYSTEM WITH THE LOCAL BOARD OF HEALTH BEFORE BACKFILLING OVER ANY SYSTEM COMPONENTS.
- 8. THE DESIGNER MUST INSPECT AND SURVEY THE INSTALLED SYSTEM PRIOR TO THE CONTRACTOR BACKFILLING OVER ANY SYSTEM COMPONENTS. THE AS-BUILT PLAN MUST BE CERTIFIED BY THE DESIGNER WITH A STAMP AND SIGNATURE.
- 9. PLAN HAS BEEN PREPARED SPECIFICALLY AS A SEPTIC SYSTEM DESIGN PLAN AND IS NOT TO BE USED TO ESTABLISH PROPERTY LINES OR BUILDING SETBACKS. NO REPRESENTATION OR CERTIFICATION AS TO THE ACCURACY OF THOSE SHOWN IS IMPLIED OR INTENDED.
- 10. SEE BENCHMARK TABLE ON THIS DRAWING FOR ELEVATION DATUM.
- 11. EXISTING UTILITY LOCATIONS HAVE NOT BEEN VERIFIED. PRIOR TO THE START OF EXCAVATION ACTIVITIES THE CONTRACTOR IS TO CALL DIG-SAFE AT 1-888-344-7233.
- 12. NO CHANGES ARE TO BE MADE TO THE PLAN DURING CONSTRUCTION UNLESS APPROVED BY THE DESIGN ENGINEER AND BOARD OF HEALTH.
- 13. THE SYSTEM HAS NOT BEEN DESIGNED TO ACCOMMODATE A GARBAGE
- 14. THE PROPOSED WORK WILL BE WITHIN THE 100' BUFFER ZONE OF A WETLAND RESOURCE AREA AND WILL REQUIRE A FILING OF A NOTICE OF INTENT WITH THE LOCAL CONSERVATION COMMISSION AND THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION UNDER THE WETLANDS PROTECTION ACT. THE CONTRACTOR SHALL OBTAIN A COPY OF THE ORDER OF CONDITIONS AND FAMILIARIZE HIMSELF WITH ALL REQUIREMENTS CONTAINED THEREIN.
- 15. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED, PER TITLE 5, SECTION 15.221(12).

DATE: NOVEMBER 9, 2021

\_12'x62' STONE BED

4'(MIN.):

1'(MIN.)

RISER

GRADE

'TITLE 5'

SAND FILL

LIMIT OF REMOVAL OF

UNSUITABLE MATERIAL (SEE GEN. NOTE 1 &

PLASTIC

A A DIA OUTLET

(SCH40) OUTLET TEE

BAFFLE .

ON 6" CRUSHED STONE LEVEL STABLE BASE

SHEA

PIPE SEAL

SOIL TESTING LOG)

6 OUTLET H-20

WITH INLET TEE

INCREASE SIZE OF

2" SCH40 PVC

FORCE MAIN

1,00(gal MONO.

PUMP CHAMBER

-FORCE MAIN TO 3" OR 4"

AT MIN. 3FT. FROM D-BOX

SYSTEM PROFILE

20" DIA CLEANOUT COVER -

LIQUID LEVEL-

DEP TITLE \$ 310 CMR, 15.226 AND SHALL BE WATER-TIGHT.

GRAVEL IN FIL CONDITION.

VENT SYSTEM

FFLUENT FILTER IN OUTLET TEE, ZABEL A1800

3 PLACES

- DISTRIB. BOX

#### **TESTING** PERFORMED BY: LUKE J. ROY, SOIL EVALUATOR - SE 2740 WITNESSED BY: ROBERT BRACEY, NORTH READING HEALTH DEPT. FIELD BOOK 143 PAGES 127-128

#### <u>TP-1</u> EL.=66.3 10YR 3/2 10YR 5/6 MED.-CRS SAND EL.=62.5) 2.5Y 6/4 TO 10YR 6/8 2.5Y 5/4 2.5Y 6/3 FL.=58.0

REFUSAL ESTIMATED HIGH GROUND WATER @ 46"(62.5) **@** 56" WATER SEEPING -STANDING WATER P-1 @ 34" PERC RATE P<2mpi

### **DESIGN**

EXISTING 5 BEDROOM DWELLING (PER ASSESSORS RECORDS) 5 BEDROOMS @ 110 gpd PER BEDROOM = 550 gpd P < 2 MIN. PER. INCH CLASS | SOIL - LTAR=0.74 gpd/sf REQUIRED AREA: (550 gpd) / (0.74 gpd/sf) = 743 sf

PLAN

DETAIL OF SOIL ABSORPTION SYSTEM

USE 12' x 62' STONE BED AREA PROVIDED:  $12' \times 62' = 744 \text{ sf}$ FLOW PROVIDED: 744 sf x 0.74 gpd/sf = 551 gpd

 $200\% \times 550 \text{ gpd} = 1100 \text{ gal}.$ USE (MIN. TITLE V) 1500 gal. SEPTIC TANK NOTE: SYSTEM HAS NOT BEEN DESIGNED TO ACCOMMODATE GARBAGE DISPOSAL.

-NOTICE-

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ENGINEERING, INC. Civil Engineers & Land Surveyors

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## SUBSURFACE SEPTIC DISPOSAL SYSTEM REPLACEMENT

25 HARDING ROAD NORTH READING, MASSACHUSETTS ASSESSORS MAP 62 PARCEL 28

APPLICANT:

SHEET:

DONALD STEPHENSON 25 HARDING ROAD NORTH READING, MA 01864

DESIGNED BY: L.J.R. DATE: DEC. 22, 2021 DRAWN BY:

SCALE: AS NOTED

CHECKED BY: L.J.R. PROJECT No: 21-135 DRAWING: 21135SEP.DWG OF 1

R.P.O.

